

# stereophile

A ROUND MAN CANNOT BE EXPECTED  
TO FIT INTO A SQUARE HOLE

## MUSIC IN by KALMAN RUBINSON THE ROUND

THIS ISSUE: Rotel's RSP-1572 preamplifier-processor is taken for a road test, and Kal shares the latest "Recordings in the Round."

### Rotel It Like It Is



The Rotel RSP-1572 has a clean design, simple controls, and clear display.

**W**hen I attended the 2011 CEDIA Expo last September, one thing I was looking for was a rumored top-of-the-line preamplifier-processor from Rotel with all the bells and whistles and a large TFT display. It was nowhere to be seen or even rumored, but the Rotel folks did introduce me to a less exalted pre-pro, their RSP-1572 (\$2199). I've always liked Rotel's styling; I guess you could say that the pretty RSP-1572 caught me on the rebound.<sup>1</sup>

Of course, that doesn't mean that the RSP-1572 is *not* replete with all the features expected in a modern pre-pro, including multiple HDMI v1.4 inputs, the latest-generation Faroudja Torino FLI30336 video processor, and multi-zone support. On the other hand, while its set of audio features is equally complete, no single one stands up and waves at the audiophile. So what? It looks good, and the only thing missing is automatic room equalization. Rotel and Classé share an apparent disdain for automatic room EQ; like Classé's SSP-800—see [www.stereophile.com/content/music-](http://www.stereophile.com/content/music-)

[round-43-page-3](http://www.stereophile.com/content/music-) for my report on the very similar CT-SSP—the RSP-1572 handles things its own way.

The Rotel RSP-1572 arrived in a small, lightweight carton—refreshing in these days of behemoth pre-pros that require double-height shelves and weigh over 30 lbs. Unpacking and setting up the 21-lb RSP-1572 are easily one-man jobs. The front panel was as clean and unencumbered as I had recalled from CEDIA. Across the top is a large, bright display that can easily be read from my listening-viewing position more than 12' away. To its left are a blue-rimmed On/Standby button, and below that a USB port. Under the display is a large, central volume knob, and to the right of that are 16 identical pushbuttons in two rows, for selecting inputs, audio mode, zone functions, and mute. To the left of the volume knob are two buttons, one above the other, that control the RSP-1572's parametric EQ. This seems to me to be the only aesthetic stumble. These useful controls, whose operations are displayed on the front panel and the OSD, are pushed to be activated, then turned to vary the parameters—but methinks these buttons doth protrude too much! I would much rather have had them elevated as subtly as the input selector buttons, and pop up

<sup>1</sup> The Rotel RSP-1572 costs \$2199. Rotel of America, 54 Concord Street, North Reading, MA 01864-2699. Tel: (978) 664-3820. Fax: (978) 664-4109. Web: [www.rotel.com/NA/](http://www.rotel.com/NA/).

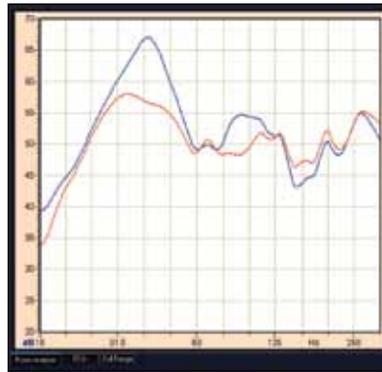
only when pressed. I raise this entirely cosmetic issue only because the RSP-1572's appearance is otherwise impeccable.

On the rear panel, inputs and outputs are logically grouped and neatly organized: six HDMI, two component, and two composite video inputs; two HDMI, one component, and four composite video outputs; four optical and three coaxial digital audio inputs; eight (count 'em!) stereo analog inputs; one 7.1-channel analog input; and one USB input. Audio outputs include one optical, one coax digital, two stereo analog, and one analog 7.1-channel preamp output with dual jacks for two center and two subwoofer outputs. There are also six RS-232 12V triggers and 10 IR in/out connectors, along with the IEC power input and power switch.

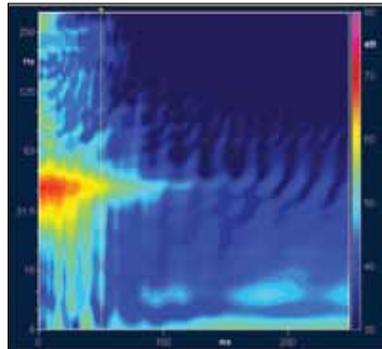
The Rotel RSP-1572 comes with a slim, simple remote control. I found its range of operations and controls fully satisfying; it even let me make temporary tweaks to the parametric EQ without having to enter the hierarchy of menus. Repeatedly hitting Display brings up sequential OSD overlays that are detailed and explicit. However, the remote is not backlit. I find this unforgivable in a home-theater component, which is apt to be used in low ambient room light. I can foresee outrage when, in the midst of a movie, someone attempts to adjust the volume and instead hits—as I did—the nearby M button, which shuts out all other controls on the remote and front panel until the RSP-1572 is rebooted. (The M button is supposedly nonfunctional. Also, the Menu button, according to the manual, requires dealer programming for use with the RSP-1572.)

By now, you might be thinking that I'm going to continue to pick away at the Rotel RSP-1572 as I describe its setup and sound. Nope—from here on out, all was smooth sailing. I connected my cable box, Oppo BDP-83SE universal Blu-ray player, and Yamaha BD-A1000 Blu-ray player to HDMI inputs 1–3, and routed six analog cables between the Oppo and the Rotel's multichannel analog inputs. The Rotel's outputs went to my Bryston 9B-SST power amplifier via RCA interconnects, and I used both of the RSP-1572's subwoofer outputs to connect my Paradigm Sub15 and Servo15 subwoofers. I turned everything on. Everything worked.

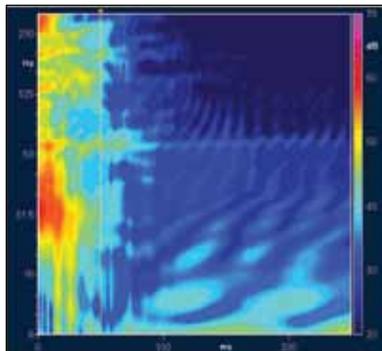
The Rotel's menus were easy to



**Fig.1** Rotel RSP-1572, low-frequency room response, 16–31Hz, before (blue) and after (red) equalization (5dB/vertical div.)



**Fig.2** Rotel RSP-1572, XTZ time-decay plot before initial correction.



**Fig.3** Rotel RSP-1572, XTZ time-decay plot after initial correction.

navigate, and its bass-management options were excellent. Although the Large/Small and Crossover Frequency settings were global or by speaker pair, the Advanced menu offers individual size settings for special audio modes, including Dolby, dts, stereo, and DSP. Thus, one could have large speakers and use them full-range for stereo, but bass-managed for other modes. Similarly, the subwoofer menu permits individual level settings for a range of format options. Since the RSP-1572 lacks auto-setup and room EQ, I used a tape measure to set speaker distances, and my Gold-Line TEF-25 kit to set

speaker levels (a RadioShack sound-level meter also would have done the job). Distances can be entered in the Rotel's menus in increments of 6", levels in increments of 1dB, and crossover frequencies in increments of 10Hz, with a range of 40–200Hz. A different default processing format, input trim, and display label can be set for each input.

To get a handle on the Rotel RSP-1572's general performance, I used it in my system for two or three weeks before attempting to implement its 10-band parametric EQ. All went swimmingly. The sound was well balanced from the HDMI sources and from the multichannel analog input, even though the latter operates as a complete bypass of all DSP and, therefore, requires bass management by the attached players. (I'd matched the levels of the two subs before connecting them to the Rotel.) The midrange and treble were clean and transparent and the bass was full, the subs providing ample weight. During this period none of my guests commented positively or negatively on the sound, and I had no trouble immersing myself in and enjoying my favorite music. There was, however, an unfamiliar richness throughout the bass that I at first found impressively satisfying. As the hours passed, however, it became clear that, especially with music, this richness was not associated with the individual recordings, but was the pervasive contribution of my room's acoustic. It was not greatly annoying, and I've heard a similar effect in many rooms and systems. Nonetheless, I've benefited from a number of room-EQ products and systems, and have grown used to the absence of the major low-frequency effects of my room, which is basically a half-cube. There's no going back for me.

Almost all the makers of pre-pros (and, presumably, A/V receivers) that include various types of automatic and manual EQ options refer to them as "room EQ," but these vary considerably in what they can actually do. I've spilled a lot of ink on the ones that have sophisticated but user-friendly systems such as Audyssey MultEQ, Anthem Room Correction, RoomPerfect, and Trinnov, but not every otherwise high-quality product is so endowed. Some, like Cary Audio's Cinema 11, 11a, and 12, have a useless auto EQ and an almost equally useless manual EQ that is the equivalent of an old-fashioned graphic EQ with fixed

frequency and Q, permitting only boost and cut adjustments, and filters in the critical room-mode range at only 80 and 160Hz ([www.stereophile.com/content/music-round-25](http://www.stereophile.com/content/music-round-25)). Totally inadequate. Arcam's AV888 has only a marginally effective auto EQ and no manual option ([www.stereophile.com/content/music-round-39](http://www.stereophile.com/content/music-round-39)). By contrast, Classé's excellent SSP-800 and CT-SSP offer only a manual parametric EQ, but it's a good one: five filters per channel, each with fully programmable center frequency, magnitude, and Q ([www.stereophile.com/content/music-round-43-page-3](http://www.stereophile.com/content/music-round-43-page-3)). Rotel, like its corporate sibling Classé, seems to eschew auto EQ—but does the RSP-1572 have a manual parametric EQ like the much pricier SSP-800, and was this pre-pro effective in dealing with room acoustics? No and yes.

#### No, they're not the same

While the Classé SSP-800 lets the user vary the frequency, Q, and gain of each of its five filters over the entire audio-band, these settings can also be made for all five filters at once for the critical range below 300Hz. The RSP-1572 has 10 filters, each variable in Q and gain and adjustable in increments of 1Hz, but each restricted to a set range of frequencies. However, four of the Rotel's filter ranges overlap below 140Hz, allowing the user to correct most modes in most rooms. Since neither the Classé nor the Rotel (nor any of the other pre-pros mentioned in the preceding paragraph) offers any measurement facilities for their manual EQs, the user must buy and learn to use an acoustical measurement system. For its simplicity and usefulness in generating mode correction filters, I used XTZ's Room Analyzer ([www.stereophile.com/content/music-round-39-page-2](http://www.stereophile.com/content/music-round-39-page-2)) with the Rotel, as I had with the Classé.

One problem with this was that the XTZ's output is analog mono and the Rotel, like many modern pre-pros, will not digitize its multichannel analog input; I couldn't easily equalize the in-room response of each channel in turn. I began, instead, by connecting the XTZ to the Rotel's CD stereo analog input and EQing the left and right main channels with bass management defeated, so that they ran full range. For example, the XTZ detected a room mode in the output of the front left speaker (fig.1, blue trace and fig.2) and suggested a filter with frequency of 41Hz, a Q of 8.9, and gain of -9dB.

### ROTEL RSP-1572: 10 PARAMETRIC FILTERS

	Frequency	Step	Default
Band 1	20–80Hz	1Hz	40Hz
Band 2	20–80Hz	1Hz	60Hz
Band 3	81–140Hz	1Hz	100Hz
Band 4	81–140Hz	1Hz	120Hz
Band 5	141–200Hz	1Hz	160Hz
Band 6	1110–1550Hz	10Hz	1300Hz
Band 7	1560–2000Hz	10Hz	1750Hz
Band 8	2.1–8kHz	100Hz	4kHz
Band 9	8.1–14kHz	100Hz	10kHz
Band 10	14.1–20kHz	100Hz	16kHz

Each filter has a Q adjustable from 1–24 and gain from -12dB to +3dB.

Since neither XTZ nor Rotel specifies how they define Q, I began with the suggested numbers, then tweaked the value of Q by observing the filter's effect. Even with the initial setting, the extended modal decay at 41Hz was eliminated (fig.3). I then dug in and fiddled with further filters at 70, 92, and 162Hz, based on the results shown by XTZ. This was done by creating a filter in the Rotel that was the visual inverse of each major response deviation shown by XTZ, especially those that also called themselves out in the time-decay plot. As a result, I got a much smoother overall response, marred only by small bump at 260Hz (fig.1, red trace). Since the Rotel offers no filtering from 200 to 1110Hz, I had to live with this bump (see sidebar, "Rotel RSP-1572: 10 Parametric Filters").

The right front speaker's output didn't seem to be exciting a room mode, perhaps because it sits close to an open doorway, while the left front speaker is a similar distance from a room corner. Still, the response showed peaks at 37 and 57Hz, and a broad but shallow trough at 85Hz. All of these were minimized with a bit of adjustment of filters. I then played some two-channel music and was amazed to hear how clean it sounded compared to the un-EQ'd state. There is no doubt that the Rotel's filter set, while not perfect, is entirely adequate and effective.

But there's more. First, I wrote down the filter parameters for the L and R speakers, and unplugged the main amp from the RSP-1572's L and R outputs. Then, in order, I connected the amp channels driving the center and surround L and R speakers, each time optimizing the filters, writing them down, and resetting them

before running the next speaker. I also connected the two subs to those outputs and EQ'd them as a pair, because the two subwoofer outputs are internally connected to a single processing channel. Finally, I reconnected everything back the way it should be, re-entered the appropriate EQ filters for each channel, and restored the Rotel's bass management. Whew!

#### Yes, the Rotel's EQ worked very well

Overall, it took me about two hours to do all that. Bottom line: In every way, the results rewarded the effort invested. Although the procedure seems tedious, this EQ effectively dealt with the major effects of my system in my room. I didn't need to bother with corrections above 200Hz, but in a room not already treated with traps and acoustical panels, it would be easy to invoke additional filters in the midrange and treble. Yes, most auto-EQ systems will do the job in one-tenth that time—but there are mitigating circumstances. First, unless you change or rearrange your speakers, you need to do this only once. Second, you get a real hands-on experience that involves you in a careful consideration of the factors that contribute to your system's overall sound. For example, in dealing with the subwoofer(s), you should experiment with repositioning it to smooth its in-room response before you apply any electronic corrections.

Now I could delve into my record collection and enjoy music uncorrupted by room modes. Now I could appreciate the Rotel RSP-1572 as a great-sounding pre-pro. I used it with familiar and new CDs, SACDs, and Blu-ray discs via the Oppo and Yamaha players. Sure, I tried it with six analog cables from the Oppo, but

compared with the felicities of the room EQ accessible via the Rotel's HDMI input, it just wasn't fair. The sound was very far from bad, but the bumpy bass and detectable subwoofer transitions didn't honor the inherent qualities of the sources or the Rotel.

Like many pre-pros, the RSP-1572 doesn't decode DSD, but with the Oppo transcoding SACDs to 88.2kHz PCM, it was comparable to the sound I got from the Anthem MRX700 and Integra pre-pros (see [www.stereophile.com/content/music-round-52](http://www.stereophile.com/content/music-round-52) and [www.stereophile.com/content/music-round-49](http://www.stereophile.com/content/music-round-49), respectively). Although the RSP-1572 is supposed to accept sample rates of up to 192kHz, I ran into a problem with the Yamaha's 176.4kHz multichannel output, which muted the Rotel's output unless I switched to two-channel. However, the RSP-1572 had no problems with 192kHz, 5.1-channel dts MA signals from 2L

Blu-rays, but again muted if the player transcoded these to multichannel PCM. When I reported this to Rotel, they swiftly responded with a firmware update that, they say, is now installed in all RSP-1572s. I installed it. It worked.

So how did the Rotel RSP-1572 stack up against its competition in the busy \$2000 class? It sounded as good as any, and was completely devoid of operational idiosyncrasies or switching noises. It distinguished itself with the delightful simplicity of its operation, which doesn't try to entice the user into meddling with processing controls but still provides all the facilities the user needs. What it lacks is any Internet access or streaming facilities, although the USB port accepts iPods, MP3 players, flash drives, and a conveniently provided Bluetooth dongle. It also lacks automatic room EQ, and some users will have to hire a professional installer to set up

its capable parametric EQ. All that suggests to me that the Rotel is a more formidable competitor in the custom-installation sector than in the audiophile/home-theater hobbyist market. On the other hand, those of us who don't mind getting our hands dirty with some measurement tools can have it all with the RSP-1572: great sound and great looks.

#### Next time in the Round

I hope to report on Bryston's long-awaited SP-3 preamplifier-processor and the Series II version of XTZ's Room Analyzer Pro. And, of course, I will offer my take on what's new and what's news in multichannel from the 2012 Consumer Electronics Show. ■

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